Aquatic Organism Passage

Conservation Issues in the Asheville Field Office

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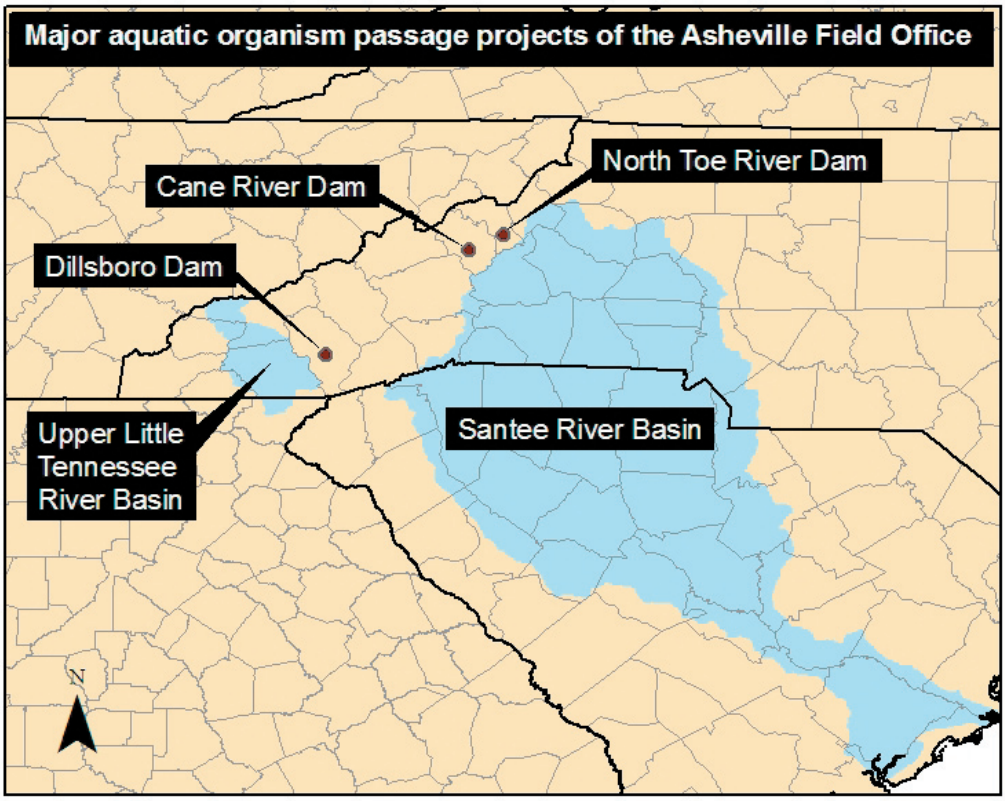

Dillsboro Dam

We usually think of streams as long, continuous strips of habitat for fish, crayfish, and other aquatic creatures, but that is often not the case. Poorly installed or maintained culverts or other stream obstructions can prevent fish and other creatures from moving up or downstream, effectively partitioning the stream into segments, fragmenting aquatic wildlife populations. Although a stream may have pristine water quality, it's useless to a fish that's unable to access it.

Biologists measuring a barrier to aquatic organisms

The Asheville Field Office has been a leader in addressing and influencing fish passage issues, both in Western North Carolina, and across the Southeast, a region with more than 600 species of fish ranging from the inch and a half-long pygmy sunfish to ten feet-long alligator gars, the greatest mussel diversity in the world, and an incredible diversity of insects, salamanders, and other aquatic life.

As part of the hydropower relicensing process for Duke Energy's projects on North Carolina's Tuckasegee and Nantahala Rivers, following the Service's recommendation, Duke Energy agreed to remove Dillsboro Dam, restoring nearly a mile of the Tuckasegee River and creating a stretch of unimpounded river more than 29 miles long. The result will be improved paddling opportunities, an improved fishery, and increased habitat for the Appalachian elktoe, an endangered mussel. Currently the mussel is found both below the dam and above the reservoir. Removing the dam will restore habitat behind the dam and reconnect the bisected population, thus improving their genetic diversity, and with it, their ability to survive.

A pair of dams, one in Mitchell and the other in Yancey County, are slated for removal in an effort spearheaded by Toe River Valley Watch and Blue Ridge Resource Conservation and Development Council. The Mitchell County dam sits on the North Toe River, outside of Spruce Pine, while the Yancey County dam sits on the Cane River, upstream from Mountain Heritage High School. The Cane and Toe Rivers join to form the Nolichucky River, which flows west into Tennessee. Both dams were constructed for power generation, though it has been decades since either produced electricity. They've been breached by their respective rivers and all that remain are massive slabs of concrete, impeding natural water flow.

The Santee River basin begins in Western North Carolina, where the headwaters of the Catawba, Broad, and Pacolet Rivers trickle down from the Eastern

Decrepit dam on the North Toe River

Continental divide. The basin includes the Congaree, Saluda, Wateree and a host of other rivers, eventually all joining to form the Santee River which empties into the ocean north of Charleston, South Carolina. It's a basin whose rivers are punctuated by dams that provide electricity to Charlotte, Greenville and Columbia. The dams that generate so much electricity are also huge barriers to migratory fish – keeping them out of spawning areas and other suitable habitat. However, the U.S. Fish & Wildlife Service, North and South Carolina, Duke Energy and South Carolina Electric and Gas are setting out to improve the situation for migratory fish. The power companies will fund the stocking of American shad to boost shad populations; they'll help shad move around South Carolina's Wateree Dam, enabling them to reach upstream spawning habitat; and help move eels past dams up and down the Catawba and Wateree rivers to reach important habitat.

In November 2006, the Asheville Field Office convened a two-day workshop on aquatic life passage for biologists and engineers from across the Southeast. The first day looked at recent Southeastern fish passage research, while on the second day workshop participants rolled up their sleeves to begin answering some of the questions facing southeastern aquatic species passage, notably assessing what's known about passage in the Southeast, and how to design and implement passage projects.

In the fall of 2007, the Asheville Field Office worked with the Service's Fisheries division and a host of state and local partners to inventory and assess barriers to aquatic life passage in the Little Tennessee River basin of Macon and Swain Counties, North Carolina. Using the data collected, biologists are working with local partners to improve road crossings to allow for better aquatic organism passage, thus opening aquatic habitat for a host of animals, including the threatened spotfin chub.

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